

von Zwischenstadien eine ontogenetische Entwicklung dargestellt werden.

Hiermit kann zum ersten Mal überhaupt die Ontogenese einer phymosomatiden Seeigelart detailliert beschrieben werden. Ein zusätzlicher Aspekt ist, dass durch diese neu gewonnenen Kenntnisse Lösungsansätze der Interpretation und Rekonstruktion von phylogenetischen Prozessen und Entwicklungen (Heterochronie: Peramorphose) innerhalb der Familie Phymosomatidae ermöglicht werden.

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A very large eagle from the type locality of *Homo neanderthalensis*

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The Neanderthal is located in the Bergisches Land (Germany) and as being the type locality of *Homo neanderthalensis* – is certainly one of the most famous fossil sites in the world. Aside from the human remains, a re-excavation of the cave sediments yielded many fossils from a variety of large and small vertebrates. However, the fact that the fossil bearing sediments were excavated from the cave and dumped at the base of the former rock face makes the chronostratigraphical allocation of the material very difficult. Even though the faunal assemblage appears to be widely coherent, AMS datings suggest at least three different ages: Middle Palaeolithic (Mousterian), Upper Palaeolithic (Gravettian), and Latest Pleistocene plus some specimens of evident historic origin.

Apart from rodents, especially birds are abundant and dominated by snow grouses (*Lagopus* sp.). But the sediments also revealed a large solitary bony claw of a bird of prey. Due to a reconstructed straight-line overall length of at least 5 cm we can assume it belonging to either an eagle or a vulture. However, the presence of a prominent and diagnostic apophysis extensoris excludes the latter. The large sea-eagles (*Haliaeetus* spp.) can also be excluded as their claws are more strongly curved, being adapted to their special fish-hunting lifestyle. Only the claws of four recent eagles of the genus *Aquila* are similar to the fossil claw in overall morphology and are furthermore comparable in size: the Golden Eagle (*A. chrysaetos*), two species of the Imperial Eagle (*A. heliaca* and *A. adalberti*) and the Verreaux's Eagle (*A. verreauxii*).

Based on a morphometric approach we elucidate with this poster contribution 1) which digit this claw belongs to and provide, based on a recently published method, 2) estimates for body mass. Our preliminary data suggests that, depending on the actual position of this claw, this specimen could have reached dimensions in the upper range known for extant eagles.

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Between the Alb and the Alps – The fauna of the Upper Cretaceous Sandbach Formation (Passau region, southeast Germany)

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Situated halfway between the Franconian Alb and the Northern Calcareous Alps, the upper Upper Turonian to basal Middle Coniacian sediments of the Sandbach Formation (Danubian Cretaceous Group; Ortenburg–Passau area, Lower Bavaria) provide valuable information on an area largely devoid of Cretaceous surface sediments. Based on the re-discovered classic collection of Gustav von Stockheim, housed in the Museum für Mineralogie und Geologie of the Senckenberg Naturhistorische Sammlungen Dresden, both the facies and fauna of the Sandbach Formation were assessed and evaluated with regard to their stratigraphic and palaeoecologic significance. The Sandbach Formation is composed of a lower Marterberg (upper Upper Turonian–lower Lower Coniacian)